REMARKS

The Pending Claims

Claims 1-2, 4, 6-7, 9-12, and 14-40 remain pending in the application. Claims 3, 5, 8, 13, and 41-52 are canceled without prejudice. Applicants have amended claim 1 to clarify the recited method of mutating an object. Applicants have amended claims 2, 6, 9, and 32-33 to correct dependencies in view of the cancelled claims and to eliminate recitation of certain subject matter in view of the amendments to claim 1. Applicants have also amended claims 9, 22, and 25 to correct obvious typographical errors.

Summary of the Office Action

No claims presently stand allowed. The Office Action objects to the specification because it contains an embedded hyperlink. The Office Action objects to claim 25 because the phrase "wherein said" is repeated. The Office Action rejects claims 1-40 under 35 U.S.C. § 103. In view of the canceled claims, the rejections under § 103 remain as follows:

(1) claims 1-2, 4, 6-7, 9-12, and 14 are rejected as unpatentable over U.S. Patent No. 6,678,880 ("Roddy");

(2) claims 29-40 are rejected as unpatentable over Roddy in view of U.S. Patent No. 5,339,430 ("Lundin"); and

(3) claims 15-28 are rejected as unpatentable over Roddy in view of U.S. Patent No. 6,510,437 ("Bak").

For the reasons set forth below, the objections and rejections in the Office Action are traversed. Accordingly, Applicants respectfully request reconsideration and allowance of the pending claims.

Discussion of the Objections to the Disclosure and Claim

Applicants have amended the specification by removing the hyperlink at page 4, line 10. Applicants have amended claim 25 by deleting double recitation of "wherein said." The amendments to the specification and claim are believed to address the objections in the Office Action.

Discussion of the Rejections Under 35 U.S.C. § 103

A. Claims 1-2, 4, 6-7, 9-12, and 14.

Claims 1-2, 4, 6-7, 9-12 and 14 are rejected as obvious in view of Roddy. Independent claim 1, as amended, recites a "mutation object" comprising, *inter alia*:

> a method for mutating at least one object of said plural objects <u>dynamically during run-time</u> to provide a new implementation <u>within the one object,</u>
>
> wherein the one object includes a first method and a second method and an interface with a pointer, and wherein <u>the method of mutating includes changing the pointer from identification of the first method to identification of the second method</u>.

(emphasis added).

Thus, the recited "mutation object" includes a particular method of providing a new implementation for an object dynamically during run time. The object includes an interface and first and second methods. The "method for mutating" includes changing normally immutable information from <u>within</u> the object, *i.e* a pointer in the object's interface, such that it identifies the second method instead of the first method thereby providing the new implementation in the form of the second method.

Roddy discloses an object oriented programming framework where objects are arranged in a hierarchy. Each object includes characteristics (e.g. shape, color, and appearance of user actuated buttons) and functional properties. The hierarchy defines relationships between two or more objects. These relationships include, for a given object, one or more "parent" and/or "child" objects. Through the principle of inheritance, an object inherits the characteristics and functional properties of its "parent" objects and passes on its characteristics and functional properties to any "child" objects. Roddy further discloses a database that includes a data file wherein the relationships between the various objects are maintained. The data file includes, for each object, pointers to its corresponding parent and child objects. Through a separately invoked "Inheritance Overviewer," a user can view and manipulate the data file. Such manipulation includes changing object relationships, i.e. adding or changing child and parent objects for a given object. When such relationships are changed, pointers in the database are changed to identify the new parent and/or child objects.

Claim 1 is not obvious in view of Roddy for at least two reasons. First, as discussed above, the claimed method requires changing information <u>within</u> the object itself, namely, a

pointer within the object's interface "from identification of the first method to identification of the second method." Roddy does not disclose, teach, or suggest changing information within the object itself, and more specifically does not disclose, teach, or suggest, changing a pointer in the object's interface to identify a different method, also within the object. Rather, Roddy discloses modifying pointers in a database that are used to identify an object's parent and child objects. In short, the claimed method includes changing reference to relationships within the object itself, *i.e.* the object's methods; while Roddy discloses changing an object's external relationships to other objects.

Second, Roddy further does not disclose, teach, or suggest a method that is performed "dynamically during run-time." In Roddy, the relationship between one object and another is changed using a separately executed graphical user interface, namely, the "Inheritance Overviewer." The Inheritance Overviewer requires direct user input to change the object's relationships and, therefore, is not done dynamically during run-time as claimed.

Because Roddy does not disclose, teach, or suggest the claimed method of changing the object's interface to identify a new method within the object or a method that is done dynamically during run time, claim 1 is patentable over Roddy. Claims 2, 4, 6-7, 9-12 and 14 depend from claim 1 and are patentable over Roddy for at least the same reasons.

B. Claims 29-40.

The Office Action rejects claims 29-40 as unpatentable over Roddy in view of Lundin. Claims 29-40 depend from claim 1, which as previously discussed includes a mutation method that changes the internal components of an object's interface and more particularly an object interface pointer to identify a second method. For the reasons enumerated above, Roddy does not disclose, teach, or suggest changing information within the object as required by claim 1. Nor is such teaching provided by Lundin. Lundin discloses a process where a kernel process directs execution of a software unit 100 toward either a new software unit 104 or an old software unit 102. (Lundin, Fig. 6, col. 12, ll. 15-18). Thus, Lundin like Roddy, describes a process where external relationships between software components are changed and in no way discloses, teaches, or suggests, altering an interface within an object such as the claimed method. According, Roddy and Lundin, either when taken alone or in combination, fail to disclose, teach, or suggest the claimed method.

C. Claims 15-28

The Office Action rejects claims 15-28 as unpatentable over Roddy in view of Bak. Claims 15-28 depend from claim 1, which as previously discussed includes a mutation method that changes the internal components of an object's interface and more particularly an object interface pointer to identify a second method. As further previously discussed, Roddy does not disclose, teach, or suggest modifying the interface from within an object to point to a new method also within the object. Nor is such teaching provided by Bak. Bak, cited in the Office Action for its alleged teachings concerning synchronization, is directed to locking and unlocking an object. However, Bak fails to discloses, teach, or suggest, changing an interface within an object such that it identifies a second method instead of a first method. According, Roddy and Bak, either when taken alone or in combination, fail to disclose, teach, or suggest the claimed method.

Articles Cited in the Patent Specification

The Examiner has requested copies of the articles cited on pages 3-5 of the specification. Applicants believe that copies of those articles were submitted with an IDS filed by its previous representatives on June 14, 2000 (copy attached). Nevertheless, Applicants have submitted herewith a supplemental IDS with copies of the references cited in the specification for consideration by the Examiner.
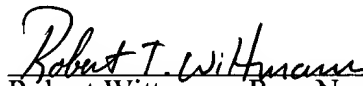
Applicants' Claim of Priority

Applicants filed a preliminary amendment on March 30, 2000 adding a claim of priority to provisional patent application serial number 60/099,562. However, no acknowledgement of Applicants' priority claim was provided in the Office Action Summary. Applicants request acknowledgement of their priority claim in the next Office Communication.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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Amendment or ROA - Regular (Revised 7/29/03)